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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/728,185

12/03/2003

Jerrold V. Hauck

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GAZDZINSKI & ASSOCIATES, P.C.  
11440 WEST BERNARDO COURT  
SUITE 375  
SAN DIEGO, CA 92127

EXAMINER

CEHIC, KENAN

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/728,185		HAUCK ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Kenan Cehic		2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-17,23-30 is/are rejected.
- 7) ☒ Claim(s) 1-7,18-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/09/2004</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because it contains terms that could be implied (see "is disclosed" line 2 of abstract). Correction is required. See MPEP § 608.01(b).
2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### *Claim Objections*

3. Claim 1-30 are objected to because of the following informalities:

For claim 1, the claim limitation "node devices" in line 3 seems to refer back to "node devices" in claim 1 line 2. If this is true, it is suggested to applicant to change "node devices" in line 3 to -- said node devices -- . Similar problems exist in claim 8 line , claim 13 line 3, 18 line 3, claim 23-30 line 4.

Claims 2-7, 9-12, 14-17, 19-22 are objected since they depend on objected claims.

Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 23-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

For claims 23-26, the claim limitation “A computer program product, containing instruction which, when executed by a computer” in line 1 and “the device containing instructions which ,when executed by a computer” in claims 27-30 lines 1-2 (there was no structure of the device disclosed), is not a process, machine, manufacture, or composition of matter, or any new and useful improvement thereof because there is no physical structure/connection of medium recited in the claims. To overcome this rejection, it is suggested to change “A computer program product, containing instruction which, when executed by a computer” to - - A computer readable medium encoded with computer executable instructions - -

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 8-10, 24, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hauck et al (US 6,356, 558 B1):

For claim 8, 24, and 28 Hauck et al. teach administering a serial bus (see Figure 4, and column 2 lines 45-49, note that method describes the case where a single packet is received, however it is intended as a reoccurring procedure, that happens when an arbitrary number or packets are incoming), the bus facilitating communication between node devices connected to the bus (see Figure 2) and communicating over the bus in the form of packetized communication (see column 2 lines 21-27) between node devices, wherein a first type of packet comprises asynchronous packets (see column 1 line 66 – column 2 line 10 and column 2 lines 46-49, the disclosure deals with subaction gaps that happen when asynchronous packets are transmitted) characterized by the absence of a requirement that an unarbitrated response or ack packet be sent in response to transmission (see column 2 lines 6-10, 56-59, the disclosure deals with any type of subaction, including subaction gaps which happen when asynchronous streams, which do not require acknowledgement packets, are transmitted) of a packet of the first type ( see Figure 5 reference 200, first type of packet, with end of subaction (EOS), is received) the method comprising:

receiving a packet of the first type ( see Figure 5 reference 200, first type of packet, with end of subaction (EOS), is received);

if there are additional packets of the first type to be sent (see column 4 lines 45-47 and 58-60, see Figure 4, reference 156), and if fly-by concatenation is permitted (see column 4 lines 56-58, see column 2 line 54-55, where it is disclosed that fly by concatenation

occurs), then concatenating the additional packets of the first type (see Figure 4 reference characteristic 160 and column 4 lines 58-60) to the received packet and sending the received packet and concatenated packets (see Figure 4, reference sign 167, received packet and concatenated packet are sent); and

if there are more packets of the first type to be sent and fly-by concatenation is not permitted (see column 2 lines 45-49 and column 4 lines 51-53, the method applies to reception of packets, thus if there are more packets to be concatenated at the reception node, while a new packet is received and concatenation is not permitted anymore) then sending the received packet (see Figure 4, reference sign 170 and column 4 lines 51-53) and arbitrating for control of the bus (see column 4 lines 53-55) and sending the concatenated packets (see Figure 4, reference sign 167, concatenated packet are sent, from previous instances of the method when concatenation was permitted).

For claim 9, Hauck et al. teach wherein concatenating the additional packets is performed by PHY hardware (see column 4 lines 58-60).

For claim 10, Hauck et al. teach wherein arbitrating for control of the bus is performed by PHY hardware (see column 4 lines 1-4, the PHY can manipulate arbitration line state; see column 3 lines 18-21, the arbitration state machine can be implemented in the PHY).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over over Hauck et al (US 6,356, 558 B1) in view of Kobayashi et al (US 2003/0179719 A1).

For claim 11, Hauck et al disclose all the claimed invention as described in paragraph 6. Hauck et al does not teach determining packet type by inspecting the first quadlet of a packet. Kobayashi et al. from the same or similar field of endeavor, teach further comprising inspecting a first quadlet (see Figure 17 "tcode", tcode is in the first quadlet) of a packet to determine a packet type (see section 0264).

For claim 12, Hauck et al disclose all the claimed invention as described in paragraph 6. Hauck et al does not teach determining that the packet is a stream packet or that it is not occurring during an isochronous period. Kobayashi et al teach wherein the first quadlet contains a transaction code (see Figure 17 "tcode", tcode is in the first quadlet), further comprising:  
determining from the transaction code that the packet is a  
stream packet (see section 0264); and  
determining that transmission is not occurring during an isochronous  
period (see section 0264, it is determined transmission is in an asynchronous period,  
which means it is not in a isochronous period).

Thus it would have been obvious to a person of ordinary skill at the time the invention was made to combine the arbitration method as taught by Kobayashi et al to the method taught by Hauck et al. One is able to combine the methods because both disclosure comply with IEEE 1394 standards, thus combination is easily implemented, since both methods have means to implement IEEE 1394 standards.



The motivation for claim 11-12 is that full compliance with the IEEE 1394 is met.

Through the uniform standard devices of different kinds are able to communicate.

11. Claim 13-15, 25, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck et al (US 6,356, 558 B1) in view of Fukunga et al (US 2003/0202539 A1).

For claim 13, 25, 29 Hauck et al teach administering a serial bus (see Figure 4, and column 2 lines 45-49, note that method describes the case where a single packet is received, however it is intended as a reoccurring procedure, that happens when an arbitrary number or packets are incoming), the bus facilitating communication between node devices connected to the bus (see Figure 2) and communicating over the bus in the form of packetized communication (see column 2 lines 21-27) between node devices, wherein a first type of packet comprises asynchronous packets (see column 1 line 66 – column 2 line 10 and column 2 lines 46-49, the disclosure deals with subaction gaps that happen when asynchronous packets are transmitted) characterized by the absence of a requirement that an unarbitrated response or ack packet be sent in response to transmission (see column 2 lines 6-10, 56-59, the disclosure deals with any type of subaction, including subaction gaps which happen when asynchronous streams, which do not require acknowledgement packets, are transmitted) of a packet of the first type ( see Figure 5 reference 200, first type of packet, with end of subaction (EOS), is received),

wherein a second type of packet comprises asynchronous packets (see column 5 lines 32-34), the method comprising:

receiving a packet of the first type ( see Figure 5 reference 200, first type of packet, with end of subaction (EOS), is received);

if there is a packet of the second type to be sent (see column 4 lines 45-47 and 58-60, see Figure 4, reference 156), and if fly-by concatenation is permitted (see column 4 lines 56-58, see column 2 line 54-55, where it is disclosed that fly by concatenation occurs), then concatenate the packet of the second type (see Figure 4 reference characteristic 160 and column 4 lines 58-60; see Figure 5 reference sign 214 the concatenated packets have different data (DATA 1) and EOD token) to the received packet of the first type (see Figure 4, reference sign 167, received packet and concatenated packet are sent);

if there is a packet of the second type to be sent (see Figure 4 reference characteristic 160 and column 4 lines 58-60; see Figure 5 reference sign 214 the concatenated packets have different data (DATA 1) and EOD token) and fly-by concatenation is not permitted (see column 4 lines 51-53; see column 2 line 54-55, where it is disclosed that fly by concatenation occurs) then send the received packet; arbitrate for the bus; (see column 4 lines 53-55) .

For claim 14, Hauck et al. teach wherein concatenating the additional packets is performed by PHY hardware (see column 4 lines 58-60).

For claim 15, Hauck et al. teach wherein arbitrating for control of the bus is performed by PHY hardware (see column 4 lines 1-4, the PHY can manipulate arbitration line state; see column 3 lines 18-21, the arbitration state machine can be implemented in the PHY).

Hauck et al does not teach that the packet is sent after the arbitration is done. Fukunga from the same or similar field of endeavor teaches that after arbitration a packet is sent (see section 0147 lines 1-7, the response packet can be of any type). Thus it would have been obvious to a person of ordinary skill at the time the invention was made to combine the arbitration method as taught by Fukunga to the method taught by Hauck et al. One is able to combine the methods because both disclosure comply with IEEE 1394 standards, thus combination is easily implemented, since both methods have means to implement IEEE 1394 standards.

The motivation for claim 13-15 is that is that full compliance with the IEEE 1394 is met. Through the uniform standard devices of different kinds are able to communicate.

12. Claim 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck et al (US 6,356, 558 B1) and Fukunga et al (US 2003/0202539 A1) as applied to claim 13-15 above, and further in view of Kobayashi et al (US 2003/0179719 A1).

For claim 16, Hauck et al disclose all the claimed invention as described in paragraph 11. Hauck et al does not teach determining packet type by inspecting the first quadlet of a packet. Kobayashi et al. from the same or similar field of endeavor, teach further

comprising inspecting a first quadlet (see Figure 17 “tcode”, tcode is in the first quadlet) of a packet to determine a packet type (see section 0264).

For claim 17, Hauck et al disclose all the claimed invention as described in paragraph 11. Hauck et al does not teach determining that the packet is a stream packet or that it is not occurring during an isochronous period. Kobayashi et al teach wherein the first quadlet contains a transaction code (see Figure 17 “tcode”, tcode is in the first quadlet), further comprising:

determining from the transaction code that the packet is a stream packet (see section 0264); and

determining that transmission is not occurring during an isochronous period (see section 0264, it is determined transmission is in an asynchronous period, which means it is not in a isochronous period).

Thus it would have been obvious to a person of ordinary skill at the time the invention was made to combine the arbitration method as taught by Kobayashi et al to the method/system taught by Hauck et al and Fukunga et al. One is able to combine the methods because both disclosure comply with IEEE 1394 standards, thus combination is easily implemented, since both methods have means to implement IEEE 1394 standards. The motivation for claim 16-17 is that full compliance with the IEEE 1394 is met. Through the uniform standard devices of different kinds are able to communicate.

***Allowable Subject Matter***

13. Claim 1-7, 18-22, are objected to as set forth in this office action, but would be allowable if rewritten to overcome those objections.

The prior art fails to teach sending an acknowledgment packet when there are no packets to transmit. While it is known in the art that where fake/bogus acknowledgement packets are sent, this usually occurs when packet transmission is present.

***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Duckwall et al. (US 6,904,044 B2)
- b. Duckwall (US 6,266,334 B1)
- c. Reames, Stephen P. (4,680,755 A)

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenan Cehic whose telephone number is (571) 270-3120. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KC



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SUPERVISORY PATENT EXAMINER